

#4 0300.



In re application of

Khemmani et al.

Serial No. 10/087,256

Art Unit

Confirmation No.

Filed: March 1, 2002

For: BIODEGRADABLE POLYMER BLENDS FOR)
USE IN MAKING FILMS, SHEETS AND OTHER)
ARTICLES OF MANUFACTURE)

Examiner: Not Yet Assigned

INFORMATION DISCLOSURE STATEMENT
UNDER 37 C.F.R. § 1.97

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Please find, pursuant to 37 C.F.R. § 1.98(a)(1), the enclosed Form PTO-1449 which contains a list of all patents, publications, or other items that have come to the attention of one or more of the individuals designated in 37 C.F.R. § 1.56(c). While no representation is made that any of these references may be “prior art” within the meaning of that term under 35 U.S.C. §§ 102 or 103, the enclosed list of references is disclosed so as to fully comply with the duty of disclosure set forth in 37 C.F.R. § 1.56.

Moreover, while no representation is made that a specific search of office files or patent office records has been conducted or that no better art exists, the undersigned attorney of record believes that the enclosed art is the closest to the claimed invention (taken in its entirety) of which the undersigned is presently aware, and no art which is closer to the claimed invention (taken in its entirety) has been knowingly withheld.

In accordance with 37 C.F.R. §§ 1.97 and 1.98, a copy of each of the listed references or relevant portion thereof is also enclosed.

In accordance with 37 C.F.R. § 1.98(c), all English translations within the possession, custody, control or availability of anyone designated in 37 C.F.R. § 1.56(c) of each nonenglish reference, if any, are also enclosed.

Statement of Relevance of References Listed
Unaccompanied by English Translation
Under 37 C.F.R. § 1.98(a)(3)

In accordance with 37 C.F.R. § 1.98(a)(3), the following concise explanation of the relevance of each listed reference that is not in the English language and unaccompanied by a translation into English is provided.

WO 90/05161: In the manufacture of thermoplastically processable starch, an additive is essentially mixed with native or natural starch and the mixture is caused to melt by the application of heat and mechanical energy. The additive is a substance which lowers the melting point of the starch so that the melting point of the starch together with this additive lies below the decomposition temperature of the starch while, in addition, the additive has a solubility parameter of over $15 \text{ cal}^{1/2} \text{ cm}^{-3/2}$. Once the starch-additive mixture has melted, the molten substance is mixed until it is at least virtually homogenous. In the melting range of the starch-additive mixture, the vapour pressure of the additive should be lower than 1 bar.

WO 96/15173: Biodegradable polyesters P1 obtainable by the reaction of a mixture consisting essentially of (a1) a mixture essentially of 35 to 95 mol% adipic acid or ester-forming derivatives thereof or mixtures thereof, 5 to 65 mol% terephthalic acid or ester-forming derivatives thereof or mixtures thereof, and 0 to 5 mol% of a sulphonate group-containing compound in which the sum of the individual mol percentages is 100, and (a2) a dihydroxy compound selected from the group consisting of C₂-C₆ alkane diols and C₅-C₁₀ cycloalkane diols, in which the molar ratio of (a1) and (a2) is in the range from 0.4:1 to 1.5:1, provided that the polyester P1 have a molecular weight (M_n) in the range from 5000 to 50,000 g/mol, a viscosity index in the range from 30 to 350 g/ml(measured in o-dichlorobenzole/phenol (in a ratio by weight of 50/50) at a concentration of 0.5 wt.% polyester P1 at a temperature of 25 °C) and a melting point in the range from 50 to 170 °C, and with the further proviso that from 0.01 to 5 mol% in relation to the molar quantity of the component (a1) used of compound D with at least three groups capable of forming esters are used to produce the polyesters P1, and other biodegradable polymers and thermoplastic moulding compounds and adhesives, biodegradable mouldings, foams and blends with starch obtainable from the polymers or moulding compounds of the invention.

WO 96/15174: Biodegradable polyether ester p1 obtainable by the reaction of a mixture consisting essentially of: (a1) a mixture essentially of 20 to 95 mol% adipic acid or ester-forming derivatives thereof or mixtures thereof, 5 to 80 mol% terephthalic acid or ester-forming derivatives thereof or mixtures thereof, and 0 to 5 mol% of a sulphonate group-containing compounds in which the sum of the individual mol percentages is 100; and (a2) a mixture of dihydroxy compounds consisting essentially of (a21) 15 to 99 mol% of a dihydroxy compound selected from the group consisting of C₂-C₆ alkaline diols and C₅-C₁₀ cycloalkane diols; (a22) 85 to 0.2 mol% of an ether function-containing dihydroxy compound as in formula 1 HO-[(CH₂)_n-O]_m-H in which n is 2, 3 or 4 and m is a whole number from 2 to 250, or mixtures thereof, in which the molar ratio of

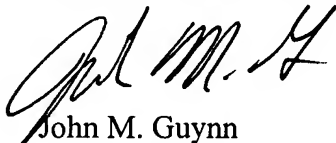
(a1) to (a2) is in the range from 0.4:1 to 1.5:1 with the proviso that the polyether esters P1 have a molar weight (M_n) in the range from 5,000 to 80,000 g/mol. a viscosity index in the range from 30 to 450 g/ml (measured in o-dichlorobenzole/phenol (weight ratio 50/50) at a concentration of 0.5 wt.% polyether esters P1 at a temperature of 25° C) and a melting point in the range from 50 to 200° C, and with the further proviso that from 0.01 to 5 mol%, in relation to the molar quantity of the components (a1) used, of a compound D with at least three groups capable of ester formation are used to produce the polyether esters P1, and other biodegradable polymers and thermoplastic moulding compounds, process for their production and biodegradable mouldings, adhesives, foams and blends with starch obtainable from the polymers or moulding compounds of the invention.

Since all other listed references are either in the English language or are accompanied by a translation into English, no concise explanation of relevance is required under 37 C.F.R. § 1.98(a)(3).

Since references are being submitted within three (3) months of the filing date, no fee is required. Please credit any overpayment or charge any additional fees to Deposit Account No. 23-3178 of the undersigned. Duplicate copies of this sheet are attached.

Dated this 2nd day of May 2002.

Respectfully submitted,



John M. Guynn
Attorney for Applicants
Registration No. 36,153



022913

JMG: cm

PATENT TRADEMARK OFFICE

CERTIFICATE OF MAILING BY "EXPRESS MAIL" (37 CFR 1.10)

Applicant(s): Kishan Khemani, Ph.D., Harald Schmidt and Simon K. Hodson

Docket No.

11527.354

Serial No.

10/087,288

Filing Date

March 1, 2002

Examiner

Not Yet Assigned

Group Art Unit

Not Yet Assigned

Invention: BIODEGRADABLE POLYMER BLENDS FOR USE IN MAKING FILMS, SHEETS AND
OTHER ARTICLES OF MANUFACTURE

I hereby certify that this Information Disclosure Statement and other documents as listed below
(Identify type of correspondence)

is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under
37 CFR 1.10 in an envelope addressed to: The Assistant Commissioner for Patents, Washington, D.C. 20231 on
May 7, 2002
(Date)



022913

PATENT TRADEMARK OFFICE

John M. Guynn

(Typed or Printed Name of Person Mailing Correspondence)

(Signature of Person Mailing Correspondence)

EL813859112US

("Express Mail" Mailing Label Number)

Note: Each paper must have its own certificate of mailing.

Transmitted: Information Disclosure Statement
Form PTO-1449 Listing Eighty-Two (82) References
Copies of the Listed References
Transmittal Letter
Postcard

TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT

(Under 37 CFR 1.97(b) or 1.97(c))

Docket No.
11527.354

In Re Application Of: Khemani, et al.

Serial No.

10/087,256

Filing Date

March 1, 2002

Examiner

Not Yet Assigned

Group Art Unit

Not Yet Assigned

Title: **BIODEGRADABLE POLYMER BLENDS FOR USE IN MAKING FILMS, SHEETS AND OTHER ARTICLES OF MANUFACTURE**

Address to:

Assistant Commissioner for Patents
Washington, D.C. 20231

37 CFR 1.97(b)

1. ☒ The Information Disclosure Statement submitted herewith is being filed within three months of the filing of a national application other than a continued prosecution application under 37 CFR 1.53(d); within three months of the date of entry of the national stage as set forth in 37 CFR 1.491 in an international application; before the mailing of a first Office Action on the merits, or before the mailing of a first Office Action after the filing of a request for continued examination under 37 CFR 1.114.

37 CFR 1.97(c)

2. ☐ The Information Disclosure Statement submitted herewith is being filed after the period specified in 37 CFR 1.97(b), provided that the Information Disclosure Statement is filed before the mailing date of a Final Action under 37 CFR 1.113, a Notice of Allowance under 37 CFR 1.311, or an Action that otherwise closes prosecution in the application, and is accompanied by one of:
- ☐ the statement specified in 37 CFR 1.97(e);
- OR**
- ☐ the fee set forth in 37 CFR 1.17(p).

TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT

(Under 37 CFR 1.97(b) or 1.97(c))

Docket No.

11527.354

In Re Application: Khemani, et al.

MAY 07 2002

Serial No.

10/087,256

Filing Date

March 1, 2002

Examiner

Not Yet Assigned

Group Art Unit

Not Yet Assigned

**BIODEGRADABLE POLYMER BLENDS FOR USE IN MAKING FILMS, SHEETS AND OTHER
ARTICLES OF MANUFACTURE**

Payment of Fee

(Only complete if Applicant elects to pay the fee set forth in 37 CFR 1.17(p))

- ☐ A check in the amount of _____ is attached.
- ☒ The Assistant Commissioner is hereby authorized to charge and credit Deposit Account No. 23-3178 as described below. A duplicate copy of this sheet is enclosed.
- ☐ Charge the amount of _____
- ☒ Credit any overpayment.
- ☒ Charge any additional fee required.

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I certify that this document and authorization to charge deposit account is being facsimile transmitted to the United States Patent and Trademark Office (F

(Date)

Signature

Typed or Printed Name of Person Signing Certificate

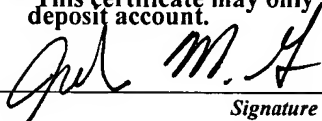
Certificate of Mailing by First Class Mail

I certify that this document and fee is being deposited with the U.S. Postal Service as first class mail under 37 C.F.R. 1.8 and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

Signature of Person Mailing Correspondence

Typed or Printed Name of Person Mailing Certificate

*This certificate may only be used if paying by deposit account.



Signature

Dated: May 7, 2002

John M. Guynn

Attorney for Applicants

Registration No. 36,153

**022913**

PATENT TRADEMARK OFFICE

CC:

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Form PTO-1449

Sheet 1 of 7

Applicant: Khemani, et al.

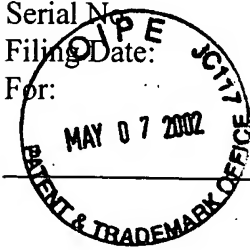
Serial No. 10/087,256

Filing Date: March 1, 2002

For: BIODEGRADABLE POLYMER BLENDS FOR USE IN MAKING FILMS, SHEETS
AND OTHER ARTICLES OF MANUFACTURE

Att'y Docket No. 11527.354

Group Art Unit: Not Yet Assigned



INFORMATION DISCLOSURE CITATIONS MADE BY APPLICANT

U.S. Patent Documents

<u>Examiner Initial*</u>	<u>Patent Number</u>	<u>Issue Date</u>	<u>Name</u>
_____ A1	4,318,950	03/09/82	Takashi et al.
_____ A2	4,364,985	12/21/82	Tokuyama et al.
_____ A3	4,536,531	08/20/85	Ogawa et al.
_____ A4	5,053,482	10/01/91	Tietz
_____ A5	5,097,004	03/17/92	Gallagher et al.
_____ A6	5,097,005	03/17/92	Tietz
_____ A7	5,124,371	06/23/92	Tokiwa et al.
_____ A8	5,171,308	12/15/92	Gallagher et al.
_____ A9	5,200,247	04/06/93	Wu et al.
_____ A10	5,219,646	06/15/93	Gallagher et al.
_____ A11	5,234,977	08/10/93	Bastioli et al.
_____ A12	5,236,762	08/17/93	Suzuki et al.
_____ A13	5,254,607	10/19/93	McBride et al.

Examiner:

Date Considered:

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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Sheet 2 of 7

Applicant: Khemani, et al.

Serial No. 10/087,256

Filing Date: March 1, 2002

For:

BIODEGRADABLE POLYMER BLENDS FOR USE IN MAKING FILMS, SHEETS
AND OTHER ARTICLES OF MANUFACTURE

Att'y Docket No. 11527.354

Group Art Unit: Not Yet Assigned



_____ A14	5,258,430	11/02/93	Bastioli et al.
_____ A15	5,262,458	11/16/93	Bastioli et al.
_____ A16	5,280,055	01/18/94	Tomka
_____ A17	5,286,770	02/15/94	Bastioli et al.
_____ A18	5,288,765	02/22/94	Bastioli et al.
_____ A19	5,292,782	03/08/94	Bastioli et al.
_____ A20	5,292,783	03/08/94	Buchanan et al.
_____ A21	5,295,985	03/22/94	Romesser et al.
_____ A22	5,296,229	03/22/94	Grandjean
_____ A23	5,314,934	05/24/94	Tomka
_____ A24	5,354,616	10/11/94	Fish, Jr. et al.
_____ A25	5,360,830	11/01/94	Bastioli et al.
_____ A26	5,362,777	11/08/94	Tomka
_____ A27	5,407,979	04/18/95	Wu et al.
_____ A28	5,412,005	05/02/95	Bastioli et al.
_____ A29	5,415,827	05/16/95	Tomka et al.
_____ A30	5,422,387	06/06/95	Toms et al.

Examiner:

Date Considered:

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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Applicant: Khemani, et al.

Serial No. 10/087,256

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BIODEGRADABLE POLYMER BLENDS FOR USE IN MAKING FILMS, SHEETS
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Group Art Unit: Not Yet Assigned

_____ A31	5,444,107	08/22/95	Ajioka et al.
_____ A32	5,446,079	08/29/95	Buchanan et al.
_____ A33	5,462,980	10/31/95	Bastioli et al.
_____ A34	5,462,982	10/31/95	Bastioli et al.
_____ A35	5,512,378	04/30/96	Bastioli et al.
_____ A36	5,525,281	06/11/96	Lörcks et al.
_____ A37	5,534,150	07/09/96	Bastioli et al.
_____ A38	5,550,173	08/27/96	Hammond et al.
_____ A39	5,559,171	09/24/96	Buchanan et al.
_____ A40	5,569,692	10/29/96	Bastioli et al.
_____ A41	5,580,911	12/03/96	Buchanan et al.
_____ A42	5,589,518	12/31/96	Bastioli et al.
_____ A43	5,599,858	02/04/97	Buchanan et al.
_____ A44	5,663,216	09/02/97	Tomka
_____ A45	5,700,344	12/23/97	Edgington et al.
_____ A46	5,705,536	01/06/98	Tomka
_____ A47	5,726,220	03/10/98	Tokushige et al.

Examiner:

Date Considered:

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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Sheet 4 of 7

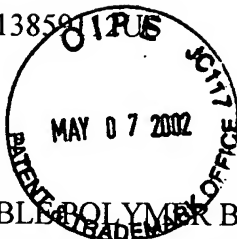
Applicant: Khemani, et al.

Serial No. 10/087,256

Filing Date: March 1, 2002

For:

BIODEGRADABLE POLYMER BLENDS FOR USE IN MAKING FILMS, SHEETS
AND OTHER ARTICLES OF MANUFACTURE



Att'y Docket No. 11527.354

Group Art Unit: Not Yet Assigned

_____ A48	5,760,144	06/02/98	Ozeki et al.
_____ A49	5,766,748	06/16/98	Ikado et al.
_____ A50	5,770,137	06/23/98	Lörcks et al.
_____ A51	5,783,271	07/21/98	Nishida et al.
_____ A52	5,786,408	07/28/98	Kuroda et al.
_____ A53	5,817,721	10/06/98	Warzelhan et al.
_____ A54	5,821,286	10/13/98	Xu et al.
_____ A55	5,844,023	12/01/98	Tomka
_____ A56	5,866,634	02/02/99	Tokushige et al.
_____ A57	5,883,199	03/16/99	McCarthy et al.
_____ A58	5,897,944	04/27/99	Loercks et al.
_____ A59	5,900,322	05/04/99	Buchanan et al.
_____ A60	5,910,350	06/08/99	Loracks et al.
_____ A61	5,910,545	06/08/99	Tsai et al.
_____ A62	5,916,950	06/29/99	Obuchi et al.
_____ A63	6,054,218	04/25/00	Nucci et al.
_____ A64	6,062,228	05/16/00	Loercks et al.

Examiner:

Date Considered:

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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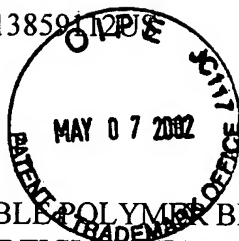
Form PTO-1449

Applicant: Khemani, et al.

Serial No. 10/087,256

Filing Date: March 1, 2002

For: BIODEGRADABLE POLYMER BLENDS FOR USE IN MAKING FILMS, SHEETS
AND OTHER ARTICLES OF MANUFACTURE



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Group Art Unit: Not Yet Assigned

_____ A65	6,096,809	08/01/00	Lorcks et al.
_____ A66	6,117,925	09/12/00	Tomka
_____ A67	6,136,097	10/24/00	Lörcks et al.
_____ A68	6,146,750	11/14/00	Kotani et al.
_____ A69	6,150,490	11/21/00	Deckwer et al.
_____ A70	6,235,825	05/22/01	Yoshida et al.
_____ A71	6,265,067	07/24/01	Nucci et al.
_____ A72	6,326,440	12/04/01	Terada et al.
_____ A73	6,350,530	02/26/02	Morikawa et al.

Examiner:

Date Considered:

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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Sheet 6 of 7

Applicant: Khemani, et al.

Serial No. 10/087,256

Filing Date: March 1, 2002

For: BIODEGRADABLE POLYMER BLENDS FOR USE IN MAKING FILMS, SHEETS
AND OTHER ARTICLES OF MANUFACTURE



Att'y Docket No. 11527.354
Group Art Unit: Not Yet Assigned

U.S. Published Applications

<u>Examiner Initial*</u>	<u>Serial Number</u>	<u>Filing Date</u>	<u>Name</u>
_____ A74	09/210,539	12/14/98	Ishibashi et al.
_____ A75	09/820,916	03/30/01	Holy

Foreign Patent Documents

<u>Examiner Initial*</u>	<u>Document Number</u>	<u>Publ. Date</u>	<u>Country or Patent Office</u>
_____ A76	EP 0 400 532 A1 ✓	12/0590	EPO
_____ A77	EP 0 525 245 A1 ✓	02/03/93	EPO
_____ A78	EP 0 539 541 B1 ✓	05/05/93	EPO
_____ A79	WO 90/05161 ✓	05/17/90	PCT
_____ A80	WO 92/09654 ✓	06/11/92	PCT
_____ A81	WO 96/15174 ✓	05/23/96	PCT
_____ A82	WO 96/15173 ✓	05/23/96	PCT

Examiner:

Date Considered:

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

EXPRESS MAIL LABEL NO. EL813859112U8

Form PTO-1449

Applicant: Khemani, et al.

Serial No. 10/087,256

Filing Date: March 1, 2002

For:

BIODEGRADABLE POLYMER BLENDS FOR USE IN MAKING FILMS, SHEETS
AND OTHER ARTICLES OF MANUFACTURE



Sheet 7 of 7

Att'y Docket No. 11527.354

Group Art Unit: Not Yet Assigned

References Cited by Applicants

While the filing of Information Disclosure Statements is voluntary, the procedure is governed by the guidelines of Section 609 of the Manual of Patent Examining Procedure and 37 C.F.R. §§ 1.97 and 1.98. To be considered a proper Information Disclosure Statement, Form PTO-1449 shall be accompanied by a copy of each listed patent or publication or other item of information and a translation of the pertinent portions of foreign documents (if an existing translation is readily available to the applicant), an explanation of relevance of each reference not in the English language, and should be submitted in a timely manner as set out in MPEP Sec. 609.

Examiners will consider all citations submitted in conformance with 37 C.F.R. § 1.98 and MPEP Sec. 609 and place their initials adjacent the citations in the spaces provided on this form. Examiners will also initial citations not in conformance with the guidelines which may have been considered. A reference may be considered by the Examiner for any reason whether or not the citation is in full conformance with the guidelines. A line will be drawn through a citation if it is not in conformance with the guidelines AND has not been considered. A copy of the submitted form, as reviewed by the Examiner, will be returned to the applicant with the next communication. The original of the form will be entered into the application file.

Each citation initialed by the Examiner will be printed on the issued patent in the same manner as references cited by the Examiner on Form PTO-892.

The reference designations "A1", "A2", etc. (referring to Applicant's reference 1, Applicant's reference 2, etc.) will be used by the Examiner in the same manner as Examiner's reference designations "A", "B", "C", etc. on Office Action Form PTO-1142.

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Examiner:

Date Considered:

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.